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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
	10/613,023	JANG ET AL.
Office Action Summary	Examiner	Art Unit	
	APRIL Y. SHAN	2135	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>26 March 2008</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1,2,4-11 and 13-21</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1,2, 4-11 and 13-21</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments filed 26 March 2008 have been respectfully and fully
considered but they are not persuasive.

2.   The Applicant's arguments are summarized as below:

        a.   Orava et al. fails to disclose creating a temporary address set and
transmitting the address set to a wireless terminal (Remark, pages 9-10)

        b.   Applicant further note each independent claim recites that the address set
is encoded using a predetermined encryption key for the temporary address set and the
encoded temporary address set is transmitted to the wireless terminal (Remark, page
10)

        c.   Dependent claims are allowable due to dependency (Remark, pages 10-
11).

        In response to argument 'a', the examiner respectfully disagrees. First, the
Applicant is respectfully reminded that One cannot show nonobviousness by attacking
references individually where the rejections are based on combination of references.
See In re Keller, 642 F. 2d 413, 208 USPQ 871 (CCPA 1981); In re Merck & Co., 800 F.
2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Second, the examiner clearly stated in the
record of rejection that Orava et al. reference discloses creating a temporary address
set ("MAC can be a random number generated by means of a random number
generator. MAC can be selected from the address space allocated to the MT on the
basis of an address selection algorithm. A temporary MAC address MAC can be

allocated to the MT for instance from among organization-specific unique identifiers

(OUI) reserved for this purpose. **Typically, one OUI allows 2^24 addresses**. The

IEEE 802 MAC address format allows locally administrable MAC addresses, in which

there are 46 available bits in a 48-bit address format for selecting the temporary MAC

address. A MAC address can also be formed of a network identifier, such as a BSS

identifier BSSID, and of a random part added thereto, for example" – e.g. Par. [0030],

[0067]-[0069]) and transmitting the temporary address set to the wireless terminal

("**This embodiment enables the usage of several MAC addresses at a time**.

Serveral services may be used, via the same **radio network and access point AP, at**

the same time which is considerable improvement compared to current station

where only one MAC address and service can be used at a time…"- e.g. par.

[0067]-[0070]) and in par. [0001], Orava et al. further dislcoses, "...to arranging

temporary MAC addresses for wireless terminals". Third, secondary reference that

Bauchot et al. discloses creating temporary address set by randomly transforming MAC

address of a wireless terminal ("…for generating Bernoulli random variables given a

value of P...**A stream of random bits is generated**...To prevent stations that have

been started...the shift registers of different stations can be initialized with a value that

is derived from its unique equipment identification tag (e.g. the 48-bit MAC address

used in the IEEE 802 standards)..." – e.g. col. 18, lines 4-59, fig. 11 and fig. 12). Orava

et al. and Bauchot et al. are in the same field of endeavor of wireless communication

and random number generation. It would have been obvious to a person with ordinary

skill in the art at the time of the invention to modify Orava et al.'s creating a plurality of

temporary address sets method with Bauchot et al.'s creating temporary address sets

by randomly transforming MAC address of a wireless terminal. The motivation of doing

so would have been "To prevent stations that have been started simultaneously from

generating the same sequence of random bits" as disclosed by Bauchot et al. (col. 18,

lines 28-30).

Thus, the combined references do teach the feature of creating a temporary

address set and transmitting the address set to a wireless terminal.

In response to argument 'b', the examiner respectfully points out in the

argument the Applicant only notes what is recited in the claim and no argument about

why the combined references do not disclose this recited claim limitation. For the sake

of the argument, even if the argument is presented, the combined references do teach

the address set is encoded using a predetermined encryption key for the temporary

address set and the encoded temporary address set is transmitted to the wireless

terminal. Please note the combined references Orava et al. (U.S. Pub. No.

20030177267) in view of Bauchot et al. (U.S. Patent No. 5,644,576) and Kallio et al.

(U.S. Patent No. 7,050,789) clearly discloses the claimed limitation. Again, the

Applicant is respectfully reminded that One cannot show nonobviousness by attacking

references individually where the rejections are based on combination of references.

See In re Keller, 642 F. 2d 413, 208 USPQ 871 (CCPA 1981); In re Merck & Co., 800 F.

2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In response to argument 'c', the examiner respectfully traverses. Applicant's

argument for claims 1, 10, 16 and 19 as discussed above are traversed and therefore,

the Applicant's arguments for dependent claims are based on dependency on claims 1,

10, 16 and 19 are traversed and they are not ready for allowance.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed
> or described as set forth in section 102 of this title, if the differences between the
> subject matter sought to be patented and the prior art are such that the subject
> matter as a whole would have been obvious at the time the invention was made
> to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was
> made.

4.   The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating
obviousness or nonobviousness.

5.   This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

6.   Claims 1-2, 4-11 and 13-21 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Orava et al. (U.S. Pub. No. 20030177267) in view of Bauchot et al.

(U.S. Patent No. 5,644,576) and Kallio et al. (U.S. Patent No. 7,050,789)

        As per **claim 1**, Orava et al. discloses a method of guaranteeing users'

anonymity in a wireless Local Area Network (LAN) system, the method comprising:

    (a) creating a temporary address set ("MAC can be a random number generated by

    means of a random number generator. MAC can be selected from the address

    space allocated to the MT on the basis of an address selection algorithm. A

    temporary MAC address MAC can be allocated to the MT for instance from among

    organization-specific unique identifiers (OUI) reserved for this purpose. Typically,

    one OUI allows 2^24 addresses. The IEEE 802 MAC address format allows locally

    administrable MAC addresses, in which there are 46 available bits in a 48-bit

    address format for selecting the temporary MAC address. A MAC address can also

    be formed of a network identifier, such as a BSS identifier BSSID, and of a random

    part added thereto, for example" – e.g. Par. [0030], [0067]-[0069]) and transmitting

    the temporary address set to the wireless terminal ("This embodiment enables the

    usage of several MAC addresses at a time. Serveral services may be used, via the

    same radio network and access point AP, at the same time which is considerable

improvement compared to current station where only one MAC address and service

can be used at a time…"- e.g. par. [0067]-[0070]); and

(b) performing data packet transmissions between the wireless terminal and a

wireless access node using a temporary address selected from the temporary address

set corresponding to the wireless terminal as a source address or a destination address

(e.g. par. [0030], [0067]-[0070]),

Orava et al. et al. does not expressly disclose creating temporary address set by

randomly transforming MAC address of a wireless terminal.

Bauchot et al. discloses creating temporary address set by randomly

transforming MAC address of a wireless terminal ("…for generating Bernoulli random

variables given a value of P…A stream of random bits is generated…To prevent

stations that have been started…the shift registers of different stations can be initialized

with a value that is derived from its unique equipment identification tag (e.g. the 48-bit

MAC address used in the IEEE 802 standards)…" – e.g. col. 18, lines 4-59, fig. 11 and

fig. 12).

Orava et al. and Bauchot et al. are in the same field of endeavor of wireless

communication and random number generation.

It would have been obvious to a person with ordinary skill in the art at the time of

the invention to modify Orava et al.'s creating a plurality of temporary address sets

method with Bauchot et al.'s creating temporary address sets by randomly transforming

MAC address of a wireless terminal.

The motivation of doing so would have been "To prevent stations that have been started simultaneously from generating the same sequence of random bits" as disclosed by Bauchot et al. (col. 18, lines 28-30)

Orava et al. – Bauchot et al. does not expressly disclose the temporary address set is encoded using a predetermined encryption key.

However, this common known feature is disclosed in Kallio et al. (e.g. col. 5, line 56 – col.6, line 3).

Orava et al. - Bauchot et al. and Kallio et al. are in the same field of endeavor of wireless communication and random number generation.

It would have been obvious to a person with ordinary skill in the art to combine Kallio et al.'s common known features with Orava et al. – Bauchot et al. to enhance security in the wireless communication since encryption/encoding is well known method in the wireless communication to produce predictable security results.

As **per claim 2,** Orava et al. - Bauchot et al. - Kallio et al. further discloses a method as applied in claim 1. Orava et al. – Bauchot et al. – Kallio et al. further discloses wherein the wireless access node creates the temporary address set, each of which consists of N (where N is an integer greater than or equal to two) temporary addresses using a MAC address contained in an access or authentication request message transmitted from the wireless terminal (e.g. Orava et al., par. [0030] and [0067]-[0070] and Bauchot et al. – e.g. 18, lines 4-59)

As per **claim 4,** Orava et al. - Bauchot et al. - Kallio et al. discloses a method as applied in claims 1. Kallio et al. further discloses wherein each encryption key is created upon authentication of the wireless terminal (col. 5, lines 34-45, lines 56-67 and col. 6, lines 1-3).

As per **claim 5,** Orava et al. - Bauchot et al. - Kallio et al. discloses a method as applied in claims 1. Orava et al. further discloses a first addressing, which is performed in the wireless access node, and generates a destination address randomly selecting, as the destination address, a temporary address set of the wireless terminal after the wireless terminal has requested authentication (e.g. par. [0054] – [0055])

As per **claim 6,** Orava et al. - Bauchot et al. - Kallio et al. discloses a method as applied in claims 5. Kallio et al. further discloses a second addressing, which is performed in the wireless terminal, and generates a source address by randomly selecting, as the source address, a temporary address from the temporary address set of the wireless terminal (e.g. par. [0029]- [0049]).

As per **claim 7**, Orava et al. - Bauchot et al. - Kallio et al. discloses the claimed method of steps as applied above in claim 1. Therefore, Orava et al. – Bauchot et al. – Kallio et al. discloses a computer readable medium having embodied thereon the claimed computer program for carrying out the method of steps.

As per **claim 8,** Orava et al. - Bauchot et al. - Kallio et al. discloses method of steps as applied above in claim 2. Therefore, Orava et al. – Bauchot et al. – Kallio et al.

discloses a computer readable medium having embodied thereon the claimed computer

program for carrying out the method of steps.

As per **claim 9**, Orava et al. – Bauchot et al. – Kallio et al. discloses the claimed

method of steps as applied above in claim 6. Therefore, Orava et al. – Bauchot et al. –

Kallio et al. discloses a computer readable medium having embodied thereon the

claimed computer program for carrying out the method of steps.

As per **claim 10**, it is rejected using the same rationale as rejecting claim 1 above.

As per **claim 11**, it is rejected using the same rationale as rejecting claim 2 above.

As per **claim 13**, it is rejected using the same rationale as rejecting claim 4 above.

As per **claims 14-15**, they are rejected using the same rationale as rejecting claims

1, 2 and 4-6 above.

As per **claims 16-18**, they are rejected using the same rationale as rejecting claim

14 above.

As per **claims 19-21**, they are rejected using the same rationale as rejecting claim

15 above.

Conclusion

7.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to APRIL Y. SHAN whose telephone number is (571)270-

1014. The examiner can normally be reached on Monday - Friday, 8:00 a.m. - 5:00

p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Kim Y. Vu can be reached on (571) 272-3859. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/April Y Shan/
Examiner, Art Unit 2135

/KimYen Vu/

Supervisory Patent Examiner, Art Unit 2135